



BHTH 5440
PATENT

The heat source is located in the center of the spiral. The liquid in the heating section is heated up by way of a heat exchange with the liquid in the cooling section and by heat absorption from the heat source. A nonreturn valve at the entrance of the heating section prevents a back-flow of water even when pressure waves are caused when the vapor pressure in the heating section is reached.

REMARKS

* Claims 1-10 are canceled and claims 11-21 are added by this amendment. Upon entry of the amendment, claims 11-21 will be pending. Attached hereto is a marked-up version of the changes made to the application by the amendment.

The commissioner is requested to charge any fee deficiency or credit any overpayment to Deposit Account No. 19-1345 in the name of Senniger, Powers, Leavitt & Roedel.

Respectfully submitted,

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VERSION WITH MARKINGS SHOWING CHANGES MADE
IN THE SPECIFICATION

Page 1, new subtitle:

[Description]

BACKGROUND OF THE INVENTION

Page 1, first paragraph:

The invention refers to a device for thermal sterilization of liquids, in particular drinking water[, in accordance with the generic part of Claim 1].

Page 1-2, last paragraph:

A spiral tube heat exchanger with a cylindrical housing that has a tangentially arranged inlet flow channel for a first medium whose cross section can be varied by means of a throttle diaphragm is known from DE 39 25 795 A1. In the housing there is a spiral channel through which the second medium flows. The incoming first medium at first flows along the wall of the housing and then between the individual windings of the spiral up to its center and [[from]] there it flows out of the housing through an outlet channel.

Page 2, before last paragraph:

SUMMARY OF THE INVENTION

Page 2, last paragraph:

The task of the invention is to design a device for thermal sterilization of liquids, especially drinking water, that can be produced simply and cheaply, is compactly constructed, and has low energy consumption.

Page 3, first paragraph:

[This task is solved by the characteristics of Claim 1.

Advantageous embodiments and further developments of the invention can be learned from the subordinate claims.]

Page 3, second paragraph:

The invention is based on the idea of using [of] a counterflow heat exchanger with a heat source arranged in its center for thermal sterilization of liquids.

Page 6, first paragraph:

The invention is illustrated in more detail below by means of embodiment examples. [Here:]

Page 6, after first paragraph:

BRIEF DESCRIPTION OF THE DRAWINGS

Page 6, before last paragraph:

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

IN THE CLAIMS

Claims 1-10 are canceled.

New claims 11-21 are added.

IN THE ABSTRACT

Page 11:

ABSTRACT

The invention relates to a device for the thermal sterilization of liquids. The inventive device includes a heat exchanger with a heat source around which a pipe of an elastic material is wound through which the liquid to be sterilized flows. The heat source is located in the center of the spiral. The liquid in the heating section is heated up by way of a heat exchange with

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the liquid in the cooling section and by heat absorption from the heat source. A nonreturn valve at the entrance of the heating section prevents a flow-back of water even when pressure waves are caused when the vapor pressure in the heating section is reached.